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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,541	04/11/2001	David A. Morgenstern	MTC 6638.7	3285
321	7590	04/02/2004	EXAMINER	
SENNIGER POWERS LEAVITT AND ROEDEL ONE METROPOLITAN SQUARE 16TH FLOOR ST LOUIS, MO 63102			OH, TAYLOR V	
			ART UNIT	PAPER NUMBER
			1625	
DATE MAILED: 04/02/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/832,541

Applicant(s)

MORGENSTERN ET AL.

Examiner

Taylor Victor Oh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-101 is/are pending in the application.
- 4a) Of the above claim(s) 77-92 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,11-52,54-75,93-95 and 97-101 is/are rejected.
- 7) ☐ Claim(s) 2,10,53,76 and 96 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10 & 12.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**Final Rejection**

**The Status of Claims**

Claims 1-101 are pending.

Claims 77-92 have been withdrawn from the consideration

Claims 1, 3-9, 11-52, 54-75 , 93-95, and 97-101 have been rejected.

Claims 2, 10, 53, 76, and 96 have been objected.

Claims 102-168 have been canceled.

**Election/ Restriction**

Due to applicants' convincing arguments, the Examiner has rejoined Group I and Group II.

**Claim Rejections - 35 USC § 112**

The rejection of claims 1 and 93 has been maintained due to applicants' failure to modify in the amendment.

Claims 11, 17-18, 30-31, 34, 46-47, 54, 74-75, and 100-101 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Phrases "or a salt thereof " and "combinations thereof " have used in the claims. These are vague and indefinite. However, those phrases are without further clarification by the specification. Therefore, an appropriate correction is required.

**Claim Rejections - 35 USC 103**

1. Applicants' argument filed 8/14/2003 have been fully considered but are not persuasive.

The rejection of Claims 1, 3-9, 11-52, 54-75 , 93-95, and 97-101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siebenhaar et al (WO 00/32310) in view of Franczyk et al (U.S. 5,739,390)

The rejection of Claims 1, 3-9, 11-52, 54-75 , 93-95, and 97-101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siebenhaar et al (WO 00/32310) in view of Franczyk et al (U.S. 5,739,390) has been maintained with the reasons of the record in paper no. 9.

Claims 2, 10, 53, 76, and 96 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**In Response to Argument**

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2. The applicants argue the following issues:
  1. the Siebenhaar et al does not describe the mechanical strength of the Raney copper catalyst or a support structure resistant to deformation under the conditions of the dehydrogenation reaction and also has failed to suggest the loss of catalyst activity due to catalyst agglomeration or the softness of copper;
  2. the Franczyk et al does not describe the mechanical strength and physical durability of the copper containing catalyst or the doped Raney copper catalyst resistant to deformation under the conditions of the dehydrogenation reaction ;
  3. the Siebenhaar et al does not describe the use of a catalyst having a support structure comprising at least 10 % by weight of a non-copper metal;
  4. the Franczyk et al does not describe any suggestion of adding metals to the catalyst in an amount sufficient to enhance the mechanical durability of the catalyst structure ;
  5. None of the references have described the use of a metal sponge support comprising at least 60 % by weight of a non-copper metal and 2 % to 30% by weight copper.

The applicants' argument have been noted, but these arguments are not persuasive.

First, with regard to the applicants' arguments, the Examiner has noted applicants' argument. However, Siebenhaar et al does teach the preparation of aminocarboxylic acid salts by oxidizing amine-group-containing primary alcohols, such

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as diethanolamine, triethnaolamine (see page 7 ,lines 6-7) with an alkaline medium in the presence of a modified Raney copper catalyst in a quantity of 0.1 to 30 % by weight (see from page 4 ,line 28 to page 5, line 6), along with a promoting agent selected from boric acid, salts of fluorine complex anions, and etc. (see page 2 ,lines 2-3).

Furthermore, Franczyk et al expressly teaches the process to prepare amino carboxylic acid salts, such as the salts of glycine, iminodiacetic acid , N-methylglycine by contacting amino alcohols, such as monoethanolamine or diethanolamine (see col. 2 ,lines 44-57) with an alkali metal hydroxide in the presence of a copper catalyst containing alkali-resistant carriers (18 weight % copper and 82 % zirconium oxide) (see col. 8 ,lines 24-25). Furthermore, the process can be involved in phosphonomethylating the carboxylic acid salt to form N-(phosphonomethyl)iminodiacetic acid or a salt , which further can be converted to N-(phosphonomethyl)glycine or a salt (see col. 3 ,lines 3-5).

In addition, concerning the presence of the supporting structure, the reference is silent. However, the supporting structure is directly related to the optimization of the catalyst activity. Similarly, Siebenhaar et al does indicate that the catalyst activity can be increased by using the promoting agent in addition to the dehydrogenation catalyst (see page 1 ,line 20). Therefore, it would have been obvious to the skilled artisan in the art to have motivated to add the supporting to the catalyst in order to optimize the catalytic activity of the dehydrogenation catalyst. This is because the skilled artisan in the art would expect the addition of the supporting structure to the catalyst in the process to increase its catalytic activity as similarly successful as shown in the case of adding the promoting agent to the dehydrogenation catalyst in the reference.

### Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to T. Victor Oh whose telephone number is (703) 305-0809. The examiner can normally be reached on 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alan Rotman can be reached on (703) 308-4698. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4556 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

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11/16/03*

*Alan L Rotman*

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